

Title (en)

A SULFIDE BASED SOLID ELECTROLYTE AND A METHOD FOR MANUFACTURING THE SAME

Title (de)

FESTELEKTROLYT AUF SULFIDBASIS UND VERFAHREN ZU SEINER HERSTELLUNG

Title (fr)

ÉLECTROLYTE SOLIDE À BASE DE SULFURE, ET SON PROCÉDÉ DE FABRICATION

Publication

**EP 4307422 A1 20240117 (EN)**

Application

**EP 22916721 A 20221227**

Priority

- JP 2021212766 A 20211227
- KR 2022021443 W 20221227

Abstract (en)

Provided are a sulfide-based solid electrolyte having improved ion conductivity and a method for preparing the same. The sulfide-based solid electrolyte contains a Group 2 element, has an argyrodite-type crystal structure, is represented by the chemical formula of  $\text{Li}_{7-x-2y}\text{M}_y\text{PS}_{6-x}\text{Ha}_x$  (wherein M represents at least one element selected from Group 2 elements, Ha is at least one element selected from halogen elements, Ha includes Br, and x and y satisfy the conditions of  $0 < x < 2.5$  and  $0 < y < 0.45$ ), and has a lattice volume of  $950\text{--}980\text{ \AA}^3$ .

IPC 8 full level

**H01M 10/0562** (2010.01); **C01B 25/14** (2006.01); **H01M 10/052** (2010.01)

CPC (source: EP KR)

**C01B 25/14** (2013.01 - EP); **H01M 10/052** (2013.01 - EP); **H01M 10/0562** (2013.01 - EP KR); **H01M 2300/0068** (2013.01 - EP KR); **Y02E 60/10** (2013.01 - EP)

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Designated extension state (EPC)

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